

Notice of Allowability	Application No.	Applicant(s)	
	09/736,812	SMITH ET AL.	
	Examiner	Art Unit	
	Wes Tucker	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed December 6, 2004.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☒ The drawings filed on 26 March 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|---|

DETAILED ACTION

Request for Continued Examination

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October-14-2004 has been entered.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jack Jankovitz, Reg. No. 42,690 on February 8, 2005.

With regard to claim 11, the last line of the claim reads "repeating steps a-o" but the steps are not numbered according to letter. Please amend claim 11 as follows:

In line 3 of claim 11 insert "c)" at the start of the line.

In line 4 of claim 11 insert "d)" at the start of the line.

In line 6 of claim 11 insert "e)" at the start of the line.

In line 8 of claim 11 insert "f)" at the start of the line.

In line 10 of claim 11 insert "g)" at the start of the line.

In line 11 of claim 11 insert "h)" at the start of the line.

In line 13 of claim 11 insert "i)" at the start of the line.

In line 16 of claim 11 insert "j)" at the start of the line.

In line 19 of claim 11 insert "k)" at the start of the line.

In line 21 of claim 11 insert "l)" at the start of the line.

In line 23 of claim 11 insert "m)" at the start of the line.

In line 26 insert "n)" at the start of the line.

In line 29 insert "o)" at the start of the line.

In line 31 insert "p)" at the start of the line.

In line 33 insert "q)" at the start of the line.

In line 35 insert "r)" at the start of the line

In line 38 replace "a-o" with "c-r".

Response to Amendments and Arguments

Applicant's response to the last Office Action, filed December 6, 2004, has been entered and made of record.

Applicant has amended claims 1, 3, 4, 5, 6, 7, 8, and 10. Claims 1-11 are pending.

Applicant's arguments have been fully considered and are persuasive. Claims 1-11 are found to be allowable. Reasons for allowance are given below.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Independent claims 1, 5, 6, 8, and 10 have all been amended to include the limitation of "acquiring multiple images, each image acquired at a different band by using a multi-band sensor system." Independent claim 4 has been amended to include the limitation of "wherein the at least two of the original bands are acquired using a multi-band sensor system." Each of these independent claims also claims streak removal once these images acquired at different spectral bands have been transformed to a new spectral space advantageous for streak removal. U.S. Patent 5,729,631 to Wober et al. teaches the transformation into an advantageous electromagnetic spectral space in the transformation from RGB to YUV space (column 8, lines 24-36). Wober also teaches the use of information from "other spectral bands" in the practice of converting RGB to YUV. All of the spectral bands from the RGB must be used to determine the YUV representation.

U.S. Patent 5,881,182 To Fiete et al. discloses a method for removing steaks comparable to invention (column 2, lines 48-60 and Figs. 4A and 4B claimed but does

not disclose that the image be transformed to different advantageous spectral space. Therefore as reasoned in the previous rejection the references of Wober and Fiete were combined to teach the transformation into another spectral space and the removal of streaks.

However neither reference teaches the limitation of "acquiring multiple images, each image acquired at a different band by using a multi-band sensor system." Neither reference teaches the added limitation of claim 4 stated as "wherein the at least two of the original bands are acquired by using a multi-band sensor system." It is known in the art to acquire multiple images from a CCD scanner with individual line scanners for the spectral spaces of Red, Green, and Blue as can be seen in U.S. Patent 6,496,286 to Yamakazi (Fig. 4, element 68 and column 7, lines 20-38). Yamakazi teaches a common way of acquiring an image using multiple spectral scanners for acquiring images at different spectral spaces, which are combined to form a composite fully colored image. However, neither Yamakazi nor any prior art found teaches the feature of transforming the acquired images of specific bands to an advantageous spectral space for streak removal using the acquired spectral bands.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 703-305-6700. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker
2-3-05


Jon Chang
Primary Examiner